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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,525	09/15/2003	Jae-Deog Cho	1293.1945	7829

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EXAMINER

RENNER, CRAIG A

ART UNIT PAPER NUMBER

2652

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/661,525

Applicant(s)

CHO ET AL.

Examiner

Craig A. Renner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 23 August 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings were received on 15 September 2003. These drawings are accepted.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 6-7, 9-12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwahara et al. (US 6,373,654).

With respect to claims 1-2, Iwahara teaches a hard disk drive (20/50) comprising a housing having a base plate (1/51) and a cover plate (7/27); a spindle motor (3) installed on the base plate; a disk (2/52) installed on the spindle motor to store data; an actuator (4) having a magnetic head (6/56) to record and/or reproduce data on the disk,

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that is installed on the base plate, and is pivoted by a voice coil motor (line 38 in column 1, for instance); a hole cover (58) made of a metal plate exhibiting an electric conductivity (lines 15-18 in column 17, for instance); and a printed circuit board (9) installed on a bottom surface of the base plate (as shown in FIG. 11B, for instance), wherein a through hole (54) where servo track information is recorded on a recording surface of the disk is positioned in the base plate (as shown in FIGS. 15A and 15B, for instance), and the hole cover covers the through hole, and is attached to a bottom surface of the base plate (as shown in FIG. 15A, for instance) to block an electromagnetic wave generated by the printed circuit board from being transferred to an inside of the housing (lines 15-18 in column 17, for instance) [as per claim 1]; wherein eddy current is generated in the hole cover by the electromagnetic wave, and the electromagnetic wave is reduced by energy loss due to the eddy current (lines 15-18 in column 17, for instance, i.e., due to the fact that the material of the hole cover is "metal") [as per claim 2].

With respect to claims 6-7 and 9-11, Iwahara teaches a hard disk drive (20/50) comprising a base (1/51) with an opening (54); a disk (2/52), rotatably installed on the base; an actuator (4) to write to and read from the disk; a printed circuit board (9); and a hole cover (58) to cover the opening and one of attenuate and block an electromagnetic wave generated by the printed circuit board (lines 15-18 in column 17, for instance) [as per claim 6]; wherein the hole cover comprises a metal plate (lines 15-18 in column 17, for instance) [as per claim 7]; wherein the hole cover is electrically conductive (lines 15-18 in column 17, for instance, i.e., due to the fact that the material of the hole cover is

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"metal") [as per claim 9]; wherein the hole cover exhibits an electrical conductivity of predetermined magnitude; the hole cover exhibits an electrical resistance of predetermined magnitude; the hole cover has a thickness of predetermined magnitude; and the hole cover attenuates the electromagnetic wave by eddy current loss (lines 15-18 in column 17, for instance, i.e. due to the fact that the material of the hole cover is "metal") [as per claim 10]; and wherein the hole cover exhibits an electrical conductivity of predetermined magnitude; the hole cover exhibits an electrical resistance of predetermined magnitude; the hole cover has a thickness of predetermined magnitude; and the hole cover blocks the electromagnetic wave by eddy current loss (lines 15-18 in column 17, for instance, i.e. due to the fact that the material of the hole cover is "metal") [as per claim 11].

With respect to claim 12, Iwahara teaches a base comprising a base plate (51); and a hole cover (58), covering an opening (54) in the base plate, and attenuating an electromagnetic wave (lines 15-18 in column 17, for instance) generated by a printed circuit board (9) [as per claim 12].

With respect to claim 14, Iwahara teaches a hole cover (58) covering an opening (54) in a base (51) of a hard disk drive (50) including a printed circuit board (9) that generates an electromagnetic wave, the hole cover comprising a metal plate attenuating the electromagnetic wave due to eddy current loss (lines 15-18 in column 17, for instance, i.e. due to the fact that the material of the hole cover is "metal") [as per claim 14].

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5. Claims 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ahn (US 5,907,454).

With respect to claims 12-13, Ahn teaches a base comprising a base plate (50); and a hole cover (54), covering an opening (52) in the base plate, wherein the hole cover attenuates an electromagnetic wave (line 38 in column 4, for instance, i.e., due to the fact that the material of the hole cover is "aluminum") [as per claim 12]; wherein the hole cover is an aluminum plate (line 38 in column 4, for instance) [as per claim 13].

With respect to the intended use limitation(s), appearing in line 1 of claim 12, for instance, note that a recitation with respect to the manner in which a claimed apparatus (i.e., "base") is intended to be employed (i.e., "for a hard disk drive including a printed circuit board", for instance) does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations, *Ex parte Masham*, 2 USPQ2d 1647 (PTO BPAI 1987).

With respect to claims 14-15, Ahn teaches a hole cover (54) comprising a metal plate (line 38 in column 4, for instance) attenuating an electromagnetic wave due to eddy current loss (line 38 in column 4, for instance, i.e., due to the fact that the material of the hole cover is "aluminum") [as per claim 14]; wherein the metal plate is aluminum (line 38 in column 4, for instance) [as per claim 15]. With respect to the intended use limitation(s), appearing in line 1 of claim 14, for instance, note that a recitation with respect to the manner in which a claimed apparatus (i.e., "hole cover") is intended to be employed (i.e., "covering an opening in a base of a hard disk drive including a printed circuit board generating an electromagnetic wave", for instance) does not differentiate

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the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. See *Ex parte Masham*, supra.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 3-5, 8, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwahara et al. (US 6,373,654) in view of Ahn (US 5,907,454).

Iwahara teaches the hard disk drive, base, and hole cover as detailed in paragraph 4, supra. Iwahara, however, remains silent as to the hole cover material being "aluminum" as per claims 3, 8, 13 and 15, and the hole cover attachment being an "adhesive" as per claim 4, and more specifically an "adhesive tape covering the hole cover" as per claim 5.

Ahn teaches that aluminum is a notoriously old and well known hole cover material in the art (line 38 in column 4, for instance). Ahn also teaches that an adhesive tape (54) covering a hole cover (54) is a notoriously old and well known art recognized equivalent hole cover attachment configuration to that taught by Iwahara for accomplishing the same function of covering an opening. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have had the hole cover material of Iwahara be aluminum as taught by Ahn, and the hole cover attachment of Iwahara be an adhesive and more specifically an adhesive tape covering the hole cover as taught by Ahn. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have had the hole cover material of Iwahara be aluminum as taught by Ahn since such is a notoriously old and well known hole cover material in the art as shown by Ahn, and since selecting a known material on the basis of its suitability for the intended use is within the level of ordinary skill in the art, *In re Leshin*, 125 USPQ 416 (CCPA-1960):


One of ordinary skill in the art would have been motivated to have had the hole cover attachment of Iwahara be an adhesive and more specifically an adhesive tape covering the hole cover as taught by Ahn since such is a notoriously old and well known art recognized equivalent hole cover attachment configuration to that taught by Iwahara for accomplishing the same function of covering an opening, and since selecting a notoriously old and well known art recognized equivalent hole cover attachment configuration on the basis of its suitability for the intended use is considered to be within the level of ordinary skill in the art.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig A. Renner whose telephone number is (571) 272-7580. The examiner can normally be reached on Tuesday-Friday 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Craig A. Renner
Primary Examiner
Art Unit 2652

CAR